

Study R9 - Existing Recreation Use Study

Oroville Facilities Relicensing
FERC Project No. 2100

Presented to the Oroville Relicensing
Recreation and Socioeconomics Work Group
February 24, 2004

Study Objective

- Estimate existing project-related recreational use
 - Day use and overnight use
 - Use of specific recreation sites and facilities
 - Use of dispersed recreation areas
 - Recreation activities within the Study Area: land and waters within and adjacent to (1/4 mile) of FERC boundary
- Estimates are stated in Recreation Days (RDs)
 - RD = one person recreating at a site during a single day for any length of time

Relation to Other Studies

- Provides information used in Study R-8 to assess carrying capacity of recreation facilities
- One input among many into Needs Analysis (R-17)

Data Sources

- Visitor Use Observations:
 - Memorial Day weekend 2002 through Memorial Day weekend 2003
 - Use monitoring forms filled out during all recreation survey site visits
 - Additional scheduled site visits
 - 25 to 40 observations at most sites
 - Counted vehicles, vehicles with trailers, and people (by activity)
 - Counted only vehicles/trailers at boat ramps & campgrounds

Data Sources (cont'd)

- DPR data collected at kiosks and traffic counters
 - Lime Saddle, Bidwell Canyon, Loafer Creek campgrounds
 - North Forebay DUA and Lake Oroville Visitors Center
- DWR traffic counters
 - 26 recreation areas (most sites in study area)
 - Conducted calibration observations of traffic and counter function
- Trail counters
 - 5 counters installed at 10 locations
 - 3 to 6 months at each location
 - Some data lost due to theft and vandalism, critters

Methods

Estimating Existing Use

- Methods used linked to best available data
- Sites with usable traffic counter data (23 sites)
 - Developed people-per-vehicle (PPV) estimates from traffic counter calibration observations
 - $\text{Vehicle count} \times \text{PPV} = \text{RDs}$
- Sites with no traffic counter or unusable traffic counter data (9 sites)
 - Develop vehicle counts from use observations
 - Develop PPV estimates from calibration observations and survey data

Methods

Estimating Existing Use

- Campground Use
 - Site occupancy data from DPR
 - Average number of campers per site from survey data
 - # sites occupied x campers per site = RDs

Methods

Activity, PAOT, VAOT Estimates

- Activity estimates:
 - Categorized RD estimates for each site by activity
 - 10 activities + "other"
 - Based on use observation data (people and trailers)
- People-at-One-Time (PAOT) and Vehicles-at-One-Time (VAOT):
 - Based on daily peak use period use observation data
 - Peak use period was usually 12 pm to 4 pm; was 8 am to 12 pm at some sites
 - Developed mean and maximum PAOT & VAOT; holiday and non-holiday

Methods

Campground Occupancy, Trail Use

- Campground Occupancy (%)
 - Based on DPR data
 - Weekday = Sunday through Thursday
 - Weekend = Friday, Saturday, & holidays
- Trail Use
 - Summarized number of individual and groups data by month for 10 segments of trail
 - Used data for 6 am to 6 pm only

RESULTS



Presentation to Recreation &
Socioeconomics WG 2/24/04

Total Study Area Visitation (RDs)

	Recreation Season		Off-Season		Total
	Weekday	Weekend	Weekday	Weekend	
Recreation Days	564,825	394,949	490,769	277,143	1,727,686
Daily Average Recreation Days	6,724	9,874	2,837	4,076	4,733

Lake Oroville Total Visitation (RDs)

	Recreation Season		Off-Season		Total
	Weekday	Weekend	Weekday	Weekend	
Lake Oroville	314,063	204,409	256,692	136,019	911,183
Bidwell Canyon	83,606	49,759	58,100	26,244	217,709
Loafer Creek	34,108	29,633	18,346	7,457	89,544
Lime Saddle	71,824	41,212	32,417	16,767	162,220
Spillway	19,490	21,528	20,879	18,619	80,516

Lake Oroville Daily Average RDs

	Recreation Season		Off-Season		Total
	Weekday	Weekend	Weekday	Weekend	
Lake Oroville	3,739	5,110	1,484	2,000	2,496
Bidwell Canyon	995	1,244	336	386	596
Loafer Creek	406	741	106	110	245
Lime Saddle	855	1,030	187	247	444
Spillway	232	538	121	274	221

Downstream Area Total Visitation (RDs)

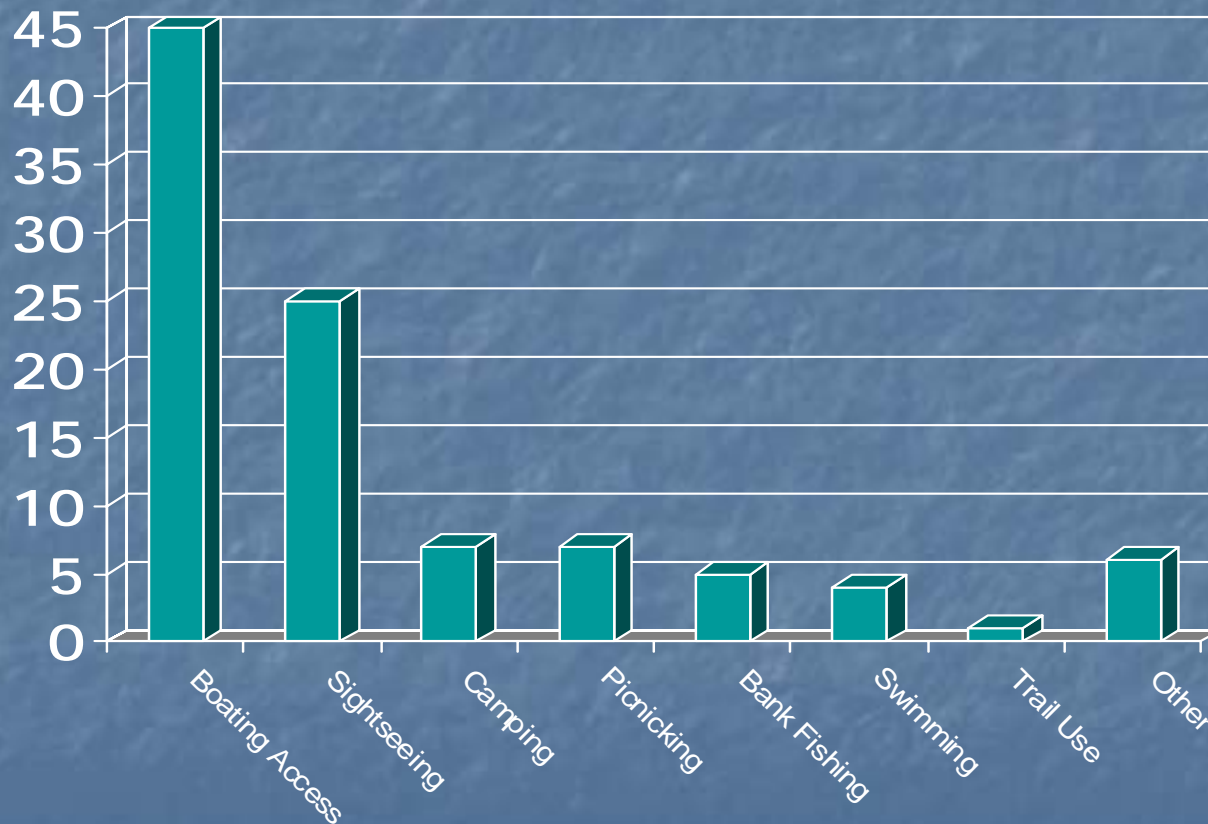
	Recreation Season		Off-Season		Total
	Weekday	Weekend	Weekday	Weekend	
Diversion Pool	4,312	2,743	8,251	5,297	20,603
Thermalito Forebay	37,113	41,124	36,722	20,761	135,720
Thermalito Afterbay	33,501	28,333	19,554	11,980	93,368
Oroville Wildlife Area	110,483	80,635	73,974	53,370	318,462

Downstream Area Daily Average RDs

	Recreation Season		Off-Season		Total
	Weekday	Weekend	Weekday	Weekend	
Diversion Pool	51	69	48	78	56
Thermalito Forebay	442	1,028	212	305	372
Thermalito Afterbay	399	708	113	176	256
Oroville Wildlife Area	1,315	2,016	428	785	872

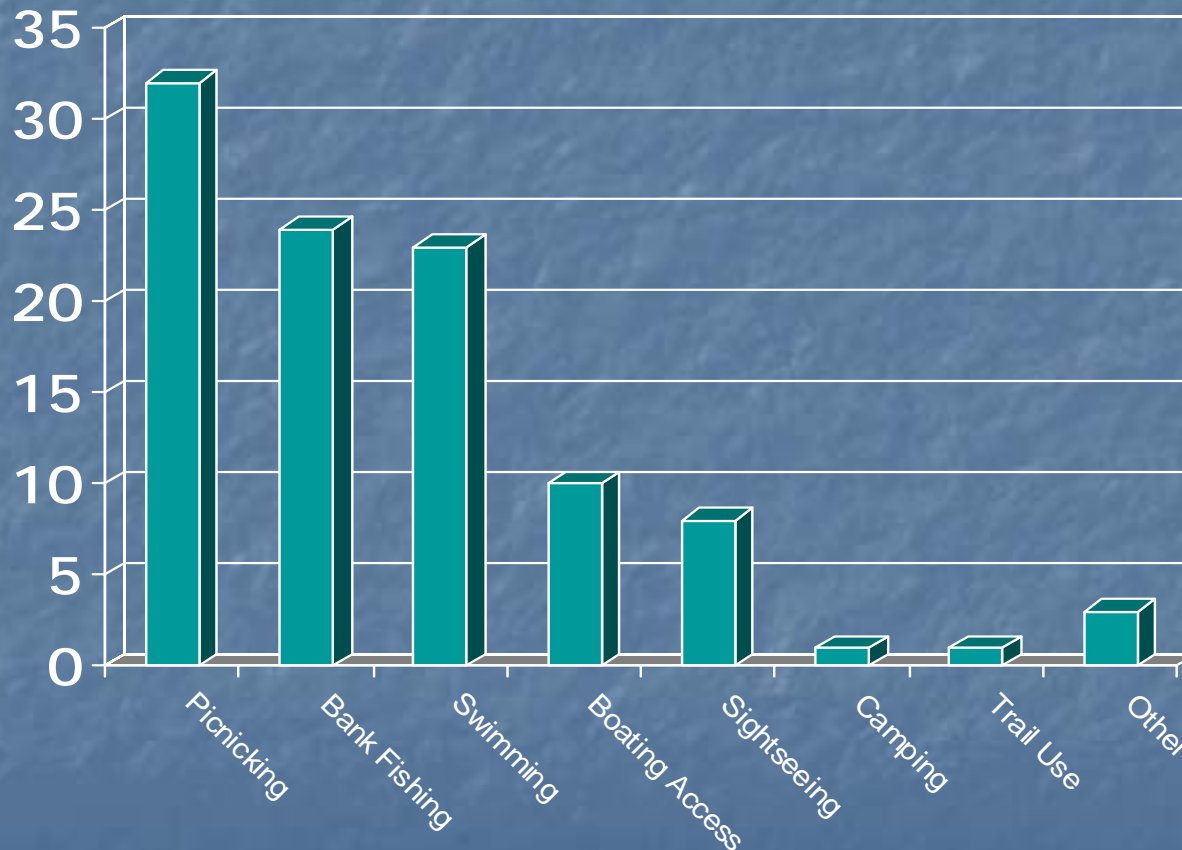
Lake Oroville Use by Activity (%)

- Study Report provides RDs and % of use by activity for individual L. Oroville sites



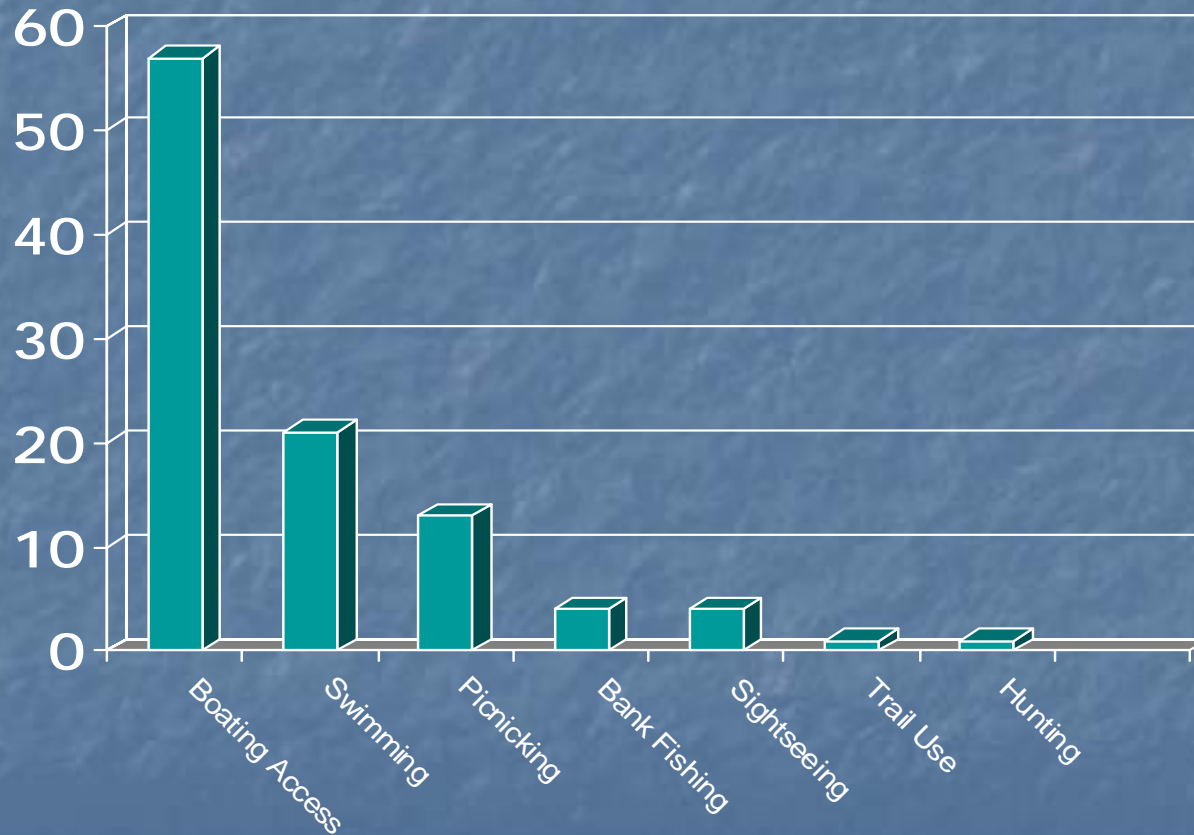
Thermalito Forebay Use by Activity (%)

- Study Report provides RDs and % of use by activity for individual sites



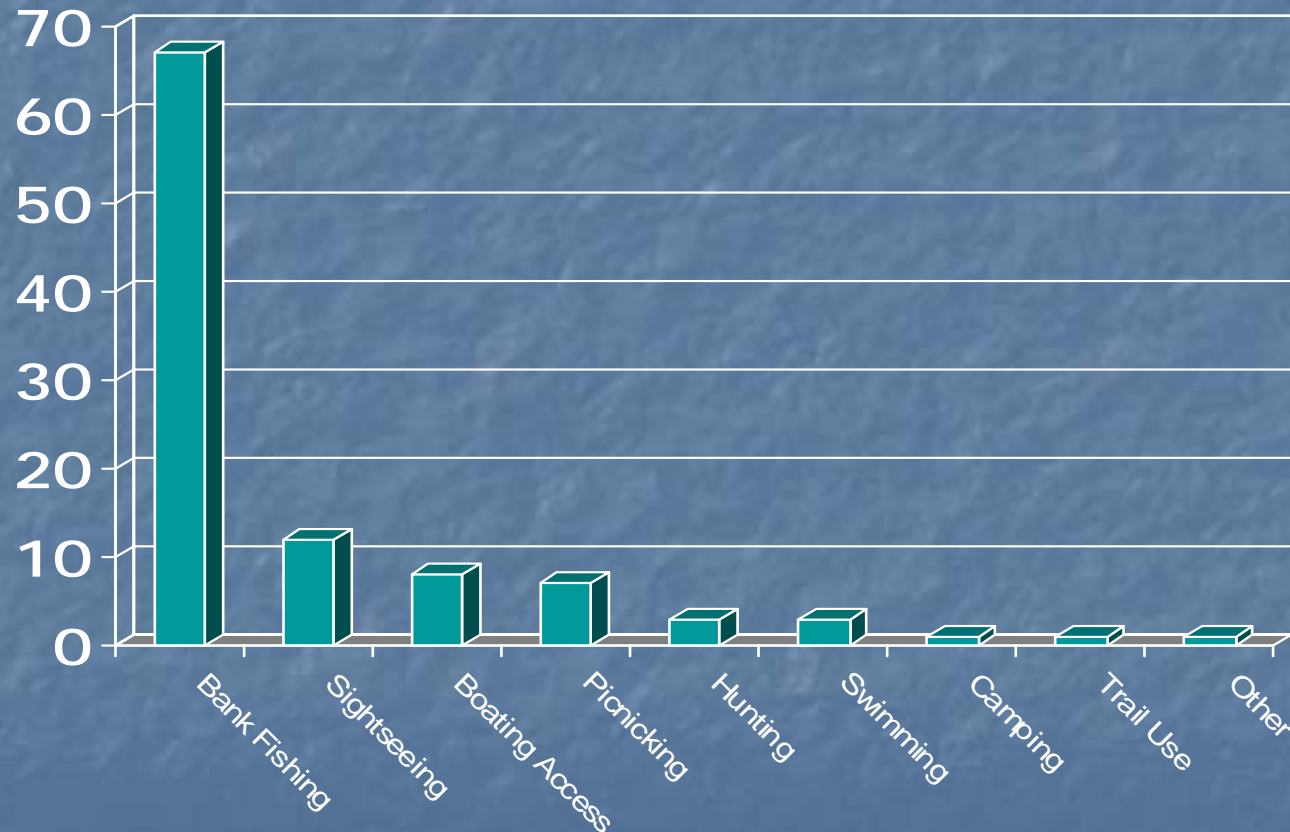
Thermalito Afterbay Use by Activity (%)

- Study Report provides RDs and % of use by activity for individual sites



OWA Use by Activity (%)

- Study Report provides RDs and % of use by activity for individual sites



Weekend Campground Occupancy (%)

	Bidwell Canyon	Lime Saddle Family	Lime Saddle Group	Loafer Creek Family	Loafer Creek Group	Loafer Creek Equestrian
May 2002	47	64	0	51	67	42
June 2002	65	45	17	40	63	16
July 2002	77	52	22	79	96	37
Aug 2002	70	44	28	58	98	19
Sept 2002	41	26	2	22	78	51
Oct 2002	16	9	Closed	5	2	39
March 2003	23	11	Closed	5	0	4
April 2003	23	15	Closed	7	0	51
May 2003	29	23	Closed	11	0	42

Use Distribution by Area (%)

	Combined Seasons	Recreation Season	Off-Season
1. Lake Oroville	54.9	55.8	53.9
2. OWA	19.2	20.6	17.5
3. FR Fish Hatchery	9.7	7.1	13.0
4. Therm. Forebay	8.2	8.4	7.9
5. Therm. Afterbay	5.6	6.7	4.3
6. Diversion Pool	1.2	0.8	1.9
7. Dispersed Use	1.1	0.8	1.6

Activity Rankings (% of RDs)

Activity	% of total use	RDs
1. Boating Access	30.4	505,004
2. Sightseeing	26.5	439,179
3. Bank Fishing	18.3	304,100
4. Picnicking	9.3	155,007
5. Swimming	6.1	100,896
6. Camping	3.8	62,339
7. Other	3.7	62,173
8. Trail Use	1.0	15,984
9. Hunting	0.8	13,861

Questions?

